

The approximate positions of the center at 6 a. m. of the 5th, 7th, 9th and 10th were as follows:

January 5, 6 a. m., 137° 30' longitude E., 5° 00' latitude N.

January 7, 6 a. m., 132° 10' longitude E., 5° 20' latitude N.

January 9, 6 a. m., 129° 30' longitude E., 9° 25' latitude N.

January 10, 6 a. m., 125° 15' longitude E., 10° 25' latitude N.

The second depression appeared on the 17th and 18th far to the SSE. and S. of Yap, near 3° latitude N. It moved slowly to N. or NNW. on the 18th, and WNW. on the 19th. Then from the 20th to 24th it moved W. by N., traversing northeastern Mindanao near Surigao,

and the southern part of the Visayas on the 23d. At the time we are writing these notes the center is still shown over the China Sea west of northern Palawan moving westward.

The approximate positions of the center at 6 a. m. of the 20th to 24th were:

January 20, 6 a. m., 136° 45' longitude E., 7° 05' latitude N.

January 21, 6 a. m., 134° 30' longitude E., 7° 50' latitude N.

January 22, 6 a. m., 130° 30' longitude E., 8° 30' latitude N.

January 23, 6 a. m., 124° 45' longitude E., 9° 35' latitude N.

January 24, 6 a. m., 121° 45' longitude E., 10° 10' latitude N.

## CLIMATOLOGICAL TABLES

### DESCRIPTION OF TABLES AND CHARTS

Table 1 gives the data ordinarily needed for climatological studies for about 180 Weather Bureau stations making simultaneous observations at 8 a. m. and 8 p. m. daily, seventh-fifth meridian time, and for about 34 others making only one observation. The altitudes of the instruments above ground are also given.

Beginning January 1, 1928, movement and velocity of the wind are printed as recorded by the 3-cup anemometer which has replaced the 4-cup pattern.

Table 2 gives, for about 37 stations of the Canadian Meteorological Service, the means of pressure and temperature, total precipitation, depth of snowfall and the respective departures from normal values except in the case of snowfall. The sea-level pressures have been computed according to the method described by Prof. F. H. Bigelow in the REVIEW of January, 1902, 30:13-16.

CHART I.—*Temperature departures*.—This chart presents the departures of the monthly mean surface temperatures from the monthly normals. The shaded portions of the chart indicate areas of positive departures and unshaded portions indicate areas of negative departures. Generalized lines connect places having approximately equal departures of like sign. This chart of monthly surface temperature departures in the United States was first published in the MONTHLY WEATHER REVIEW for July, 1909, but smaller charts appear in W. B. Bulletin U for 1873 to June, 1909, inclusive.

CHART II.—*Tracks of centers of ANTICYCLONES*; and

CHART III.—*Tracks of centers of CYCLONES*. The Roman numerals show the chronological order of the centers. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the observations at 8 a. m. and 8 p. m., seventh-fifth meridian time. Within each circle is also given (Chart II), the last three figures of the highest barometric reading, or (Chart III) the lowest reading reported at or near the center at that time, in both cases as reduced to sea level and standard gravity. The inset map of Chart II shows the departure of monthly mean pressure from normal and the inset of Chart III shows the change in mean pressure from the preceding month.

CHART IV.—*Percentage of clear sky between sunrise and sunset*.—The average cloudiness at each Weather Bureau

station is determined by numerous personal observations between sunrise and sunset. The difference between the observed cloudiness and 100 is assumed to represent the percentage of clear sky, and the values thus obtained are the basis of this chart. The chart does not relate to the nighttime.

CHART V.—*Total precipitation*.—The scales of shading with appropriate lines show the distribution of the monthly precipitation according to reports from both regular and cooperative observers. The inset on this chart shows the departure of the monthly totals from the corresponding normals.

CHART VI.—*Isobars at sea level, average surface temperatures, and prevailing wind directions*.—The pressures have been reduced to sea-level and standard gravity by the method described by Prof. Frank H. Bigelow in the REVIEW for January, 1902, 30:13-16. The pressures have also been reduced to the mean of the 24 hours by the application of a suitable correction to the mean of 8 a. m. and 8 p. m. readings at stations taking two observations daily, and to the 8 a. m. or the 8 p. m. observation, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in the Annual Report of the Chief of the Weather Bureau, 1900-1901, volume 2, Table 27, pages 140-164.

The sea-level temperatures are now omitted and average surface temperatures substituted. The isotherms can not be drawn in such detail as might be desired, for data from only the regular Weather Bureau stations are used.

The prevailing wind directions are determined from hourly observations at the great majority of the stations. A few stations determine their prevailing directions from the daily or twice-daily observations only.

CHART VII.—*Total snowfall*.—This is based on the reports from regular and cooperative observers and shows the depth in inches of the snowfall during the month. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures also are given. This chart is published only when the snowfall is sufficiently extensive to justify its preparation. The inset of this chart, when included, shows the depth of snow on the ground at the end of the month.

CHARTS VIII, IX, etc.—*North Atlantic Weather maps of particular days*.